



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/437,418

11/10/1999

SAID KARBASSI

M10-25447

7959

128

7590

01/15/2003

HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

MARTIR, LILYBETT

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/437,418

Applicant(s)

KARBASSI ET AL.

Examiner

Lilybett Martir

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-32, 44-46 and 51-54 is/are rejected.
- 7) ☒ Claim(s) 33-43, 47-50, 55-57 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the upper housing surface and the lower housing surface being coplanar (Claim 46) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 46-52 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
 - In claim 46, the recitation of "such that the upper housing surface and the lower housing surface are coplanar" makes said claim indefinite, since it is not clear from said recitation how a structure is shaped or drawn based on the interpretation of said recitation. Also, in said claim, the recitation of "the upper element surface" makes said claim indefinite, since no upper element surface has been previously defined and therefore said recitation lacks antecedent of basis.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over IP (Pat. 6,040,625) in view of Frederick (Pat. 4,209,776) or Narita et al. (EP0779503A2).

- With respect to claim 30, Ip discloses a housing 40 inherently having an upper or top surface and a well as noted in Figure 6, and a force-sensing element comprised by element 20. Ip fails to disclose the upper surface of the housing and the upper element of the force-sensing element being coplanar. Frederick teaches a transducer element 26 arranged within a mounting in a manner so that the upper surface of the housing 30 and the upper element of the force-sensing element being coplanar are essentially co-planar (Note in Figure 4 that the outermost portion of elements 26 and 30 are both lying in the same plane). Narita et al. also discloses the upper surface of the housing 4 and the upper element of a sensing element 1 being coplanar. Since it has been held that rearranging parts of an invention involves only routine skill in the art. (In re Japikse, 86 USPQ 70), one of ordinary skill in the art would have readily recognized the advantages and desirability of arranging the upper surface of the housing and the upper element of the sensing element being coplanar are essentially co-planar to more directly expose the sensing

element to the parameters being detected therefore increasing the accuracy and reliability of the arrangement.

- With respect to claim 31, Ip discloses a sensor arrangement 20 that inherently has a thickness and a supporting shelf structure C. Ip fails to disclose the sensor arrangement being supported by a shelf in the housing. Narita et al. discloses a sensor arrangement where the housing includes a shelf 3 which supports a sensing element 1 within a well as noted in Figures 6 and 7, such that the upper element surface of 1 and the upper housing surface of 4 are coplanar. One of ordinary skill in the art would have readily recognized the advantages and desirability of utilizing a shelf means to support the sensing structure in a secure and effective manner and arranging the upper surface of the housing and the upper element of the sensing element being coplanar are essentially co-planar to more directly expose the sensing element to the parameters being detected to therefore increase the accuracy and reliability of the arrangement.
- With respect to claim 32, Ip discloses a sensor arrangement 20 that inherently has a thickness and a supporting shelf structure C. Ip fails to disclose the sensor arrangement being supported by a shelf in the housing such that the depth of the shelf and the thickness of the sensing element are substantially similar. Narita et al. discloses a sensor arrangement where the housing includes a shelf 3 which supports a sensing element 1 that have substantially similar depth/thickness within a well as noted in Figures 6 and 7. One of

Art Unit: 2855

ordinary skill in the art would have readily recognized the advantages and desirability of utilizing a shelf means both having a substantially similar depth and thickness to therefore support the sensing structure in a secure and effective manner.

7. Claims 44-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over IP in view of Frederick or Narita et al. and further in view of Murakami et al. (Pat. 5,130,500).

- With respect to claim 44, Ip teaches the utilization of a covering portion 60. Ip fails to disclose that the covering is a membrane that provides electrical insulation. Murakami et al. teaches a sensor arrangement that comprises a top frame made of plastic and therefore non-conducting material. One of ordinary skill in the art would have readily recognized the advantages of protecting an electrical sensing device from unwanted currents to therefore improve its reliability.
- With respect to claim 45, Ip teaches the utilization of a covering portion 60. Ip fails to disclose that the covering is a membrane that provides electrical insulation. Murakami et al. teaches a sensor arrangement that comprises a top frame made of plastic and therefore protecting material. One of ordinary skill in the art would have readily recognized the advantages of protecting an electrical sensing device from unwanted environmental hazards to therefore improve its reliability and durability.

Art Unit: 2855

8. Claims 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over IP in view of Narita et al.

- With respect to claim 46, Ip discloses a housing 40 with a well and a shelf C as noted in Figures 1 and 6, and a force-sensing element comprised by element 20. Ip does not disclose the shelf supporting the sensing element. Narita et al. teaches a sensor arrangement where the housing includes a shelf 3 which supports a sensing element 1 that have substantially similar depth/thickness within a well as noted in Figures 6 and 7. One of ordinary skill in the art would have readily recognized the advantages and desirability of utilizing a shelf means both having a substantially similar depth and thickness to therefore support the sensing structure in a secure and effective manner.

9. Claims 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over IP in view of Narita et al. as applied to claims 46 above and further in view of Murakami et al.

- With respect to claim 51, Ip teaches the utilization of a covering portion 60. Ip fails to disclose that the covering is a membrane that provides electrical insulation. Murakami et al. teaches a sensor arrangement that comprises a top frame made of plastic and therefore non-conducting material. One of ordinary skill in the art would have readily recognized the advantages of protecting an electrical sensing device from unwanted currents to therefore improve its reliability.

Art Unit: 2855

- With respect to claim 45, Ip teaches the utilization of a covering portion 60. Ip fails to disclose that the covering is a membrane that provides electrical insulation. Murakami et al. teaches a sensor arrangement that comprises a top frame made of plastic and therefore protecting material. One of ordinary skill in the art would have readily recognized the advantages of protecting an electrical sensing device from unwanted environmental hazards to therefore improve its reliability and durability

10. Claim 53 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ip in view of Frederick .

- With respect to claim 53, Ip teaches applying a force-sensing element 20 to a housing part 40 (Col. 4, lines 11-12). Ip does not disclose attaching the sensing element so that the edge of the outwardly facing element surface abuts or lies adjacent an edge of the outwardly facing housing surface and attaching the sensing element. Frederick teaches the arrangement of a sensing element 26 so that the edge of the outwardly facing element surface abuts or lies adjacent an edge of an outwardly facing housing surface 30, said sensing element being attached to the housing (Col. 4, lines 3-7). One of ordinary skill in the art would have readily recognized the advantages and desirability of securing the sensing element against loss or displacements that may cause malfunction.

11. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ip in view of Frederick as applied to claim 53 above and further in view of Narita et al.

Art Unit: 2855

- With respect to claim 54, Ip discloses a housing 40 with a well and a shelf C as noted in Figures 1 and 6, and a force-sensing element comprised by element 20. Ip does not disclose the shelf supporting the sensing element. Narita et al. teaches a sensor arrangement where the housing includes a shelf 3 which supports a sensing element 1 that have substantially similar depth/thickness within a well as noted in Figures 6 and 7. One of ordinary skill in the art would have readily recognized the advantages and desirability of utilizing a shelf means both having a substantially similar depth and thickness to therefore support the sensing structure in a secure and effective manner

Allowable Subject Matter

12. Claims 33-43 and 55-57 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, or if the limitations of any of said claims are included in the base claim including the limitations of any intervening claims.

13. Claims 47-50 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims, or if the limitations of any of said claims are included in the base claim including the limitations of any intervening claims.

Art Unit: 2855

Response to Arguments


14. Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

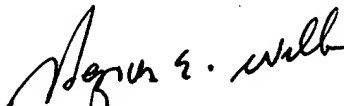
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 9:00 AM to 5:30 PM.

16. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703)305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

17. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.


Lilybett Martir
Examiner
Art Unit 2855


January 8, 2003


HEZRON WILLIAMS
SUPERVISOR, PATENT EXAMINER
TECHNOLOGY CENTER 2800